

1 RECORD OF ORAL HEARING  
2  
3 UNITED STATES PATENT AND TRADEMARK OFFICE  
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5  
6 BEFORE THE BOARD OF PATENT APPEALS  
7 AND INTERFERENCES  
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9  
10 Ex parte TRAVIS D. FOX,  
11 EDWIN S. OLDS, MARK A. GAERTNER,  
12 and ABBAS ALI  
13

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15 Appeal 2007-3341  
16 Application 10/602,254  
17 Technology Center 2100  
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21 Oral Hearing Held: October 23, 2007  
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25 Before KENNETH W. HAIRSTON, LEE E. BARRETT, and  
26 ROBERT E. NAPPI, *Administrative Patent Judges*.  
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29 The above-entitled matter came on for hearing on Tuesday,  
30 October 23, 2007, commencing at 1:21 p.m., at the U.S. Patent and  
31 Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Dawn A.  
32 Brown, Notary Registration No. 7066896, Notary Public.

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A P P E A R A N C E S

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P R O C E E D I N G S

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THE USHER: Calendar Number 14, Mr. McCarthy.

JUDGE HAIRSTON: How are you today?

MR. McCARTHY: I'm good.

May it please the panel, I'm Randy McCarthy with the  
Oklahoma City-based law firm of Feller Snider and am here today on behalf  
of Seagate Technology, L.L.C.

I know you all have reviewed the briefs in the case. You are  
familiar with the issues taking place. I'll try not to go over all of that. I'd  
prefer to answer any questions you might have, or at least I say I would. But  
I'd prefer to spend time that is best useful to you all to understand our  
position and ultimately how the case ought to be judged.

Basically, the issues here, since several of them have been  
dropped, the main issues are the 102 rejection over the Olds reference, and

1 then we'll talk briefly about the 103 reference with the other two.

2 Before we do that, if it is acceptable to you, since I came all this  
3 way, I want to tell you all about our exciting invention. I'd like to, for your  
4 indulgence, just take a couple of minutes to give you a background.

5 Basically, what is going on here is this. Every drive wishes to  
6 be a RAM device, and obviously, I'm speaking, of course, in just generally  
7 what the preferred embodiment is, embodiment in a disk drive. That  
8 statement still stands.

9 A disk drive wishes it could be like its brethren, the RAM, in  
10 which case it always asks for some data and immediately comes back. That  
11 is what it aspires to do.

12 Unfortunately, certain types of data storage devices, like disk  
13 drives, have heads that have to move and disks that rotate. The data are  
14 located on difference surfaces at different radial locations. So there is a  
15 built-in latency, electromechanical latency that has to be figured in.

16 So the driver can't be a hundred percent responsive in terms of  
17 always being able to respond to data-access requirements, so it is going to do  
18 the next best thing. You're going to get an average timing on that.

19 So in other words, the overall data transfer rate, yeah,  
20 occasionally there might be an outlier, but overall, the host and ultimately  
21 the user is pleased with the apparent speed at which the data are coming off  
22 the drive.

23 Okay. The Olds reference, which, of course, is the prior art  
24 cited in the 102 case and it is owned by Seagate as well, gives these really  
25 interesting time charts, and I'm sure you have looked at those. I'd like to  
26 discuss them briefly.

1           What is under consideration here are a first command, first data  
2 command, data 1 and 2.

3           JUDGE HAIRSTON: Figure 4?

4           MR. McCARTHY: Yes, sir. Figures 4, 5 and 6.

5           In Figure 4, there is no speculative data. Simply, the data 1  
6 command is executed. There is a seek and there is a period of time latency  
7 while we wait for the second data to come around. When it gets there, you  
8 execute the second command.

9           Now, what Olds recognizes is that speculative data, that is  
10 nonrequested data, may have merit, may have value to the user. We're going  
11 to spend this time anyway; why don't we go grab some speculative data? Of  
12 course, we're not the first ones to have invented that, even in the Olds case.  
13 So Olds gives a couple of alternative examples.

14           In Figure 5, you stay on track and pick up this additional data  
15 called read lookahead data. In other words, you pick up additional data on  
16 that track and wait until the last possible second. Then you do your seek and  
17 then you catch up the second data. And then the third one, you do it  
18 sometime in the middle. You say, Well, we'll have some data from here and  
19 here.

20           In all three cases, the second data command is executed at the  
21 exact same time. There is no way to physically advance that. It is a function  
22 of physics, the time-space continuum. We have to wait so many  
23 milliseconds until that second data are going to be executed. So Olds says,  
24 Let's get the data we can in that interval. Okay.

25           But what -- the improvement here is represented, by the case  
26 that we're looking at right now, is what if we decided to extend the time to  
27 get speculative data and forgo the opportunity to execute that? That is the

1 question. That is really the nub of what the preferred embodiments in the  
2 spec are talking about is making the decision as to instead of staying here.

3 For example, staying here in Figure 5 all the way to this point  
4 and then doing the seek so we get to this data, just by way of example, what  
5 if we stay on this track some more and get this data out here?

6 What the new specification is talking about is what if we make  
7 the decision at this point that this data may have greater utility than this data.  
8 And we're going to burn RAM to ultimately get this data.

9 It is somewhat counterintuitive because ultimately, as I said  
10 before, what we're trying to do do is try to bang out these access commands  
11 as fast as possible, but we judge in some cases it might make sense to get the  
12 speculative data, the unrequested data, in lieu of, instead of going ahead and  
13 satisfying the second command.

14 Thank you for allowing me to say all of that. I probably would  
15 have exploded if I hadn't had a chance to get that to you. It will be helpful  
16 as we look at the claims.

17 You all have read these claims. You know what I'm going to  
18 say. Let me say it anyway. When an examiner is charged with looking at a  
19 claim, he is obviously supposed to give the broadest reasonable  
20 interpretation. We love that. That is no problem. Has to be consistent with  
21 the specification. We love that, too. That is not a problem.

22 However, an interpretation of a claim turn that is inconsistent  
23 with the specification, particularly if there is an explicit definition in that  
24 specification, we have gone beyond what is reasonable, and that is what we  
25 believe has happened in this case.

26 Our understanding of the issues that remain with regard to the  
27 102 rejection is this: That the intervening seek command -- for example,

1 this seek command I pointed to earlier -- could be construed as the recited  
2 data transfer command in Claims 1 and 25, either in its entirety or as part of  
3 the larger command. Both of those issues appear to have been advanced.

4 It doesn't matter because in both cases, we believe that that is an  
5 error. That is -- that the specification clearly distinguishes between the  
6 execution of the data commands and any kind of intervening commands or  
7 other things you might do in order to set up that command.

8 The board is directed to the specification on page 7. If you'll  
9 allow me, I'd like to read it. This is in the brief. The specification provides  
10 an explicit definition for the term access time. Access time, of course, is that  
11 time between the execution of two commands.

12 In the spec, at page 7, lines 3 through 7, access time is the  
13 amount of time between completion of an execution of an access command  
14 and a subsequent execution of a net-scheduled access command. Access  
15 time includes a seek time, which includes head settle time, a setup time and  
16 a latency period.

17 And it goes on in the remaining part of that specification to  
18 make it clear that the access time is not part of the execution of the first and  
19 second commands. And part of that access time might include the seek  
20 command. So that is the position of the applicant.

21 Are there any questions or clarifications?

22 JUDGE BARRETT: Claim 1, you say, Execution of a second  
23 data transfer command to transfer speculative data in lieu thereof. Is to  
24 transfer speculative in lieu thereof, is that actually a positive-method step or  
25 is that some sort of intended use?

26 MR. McCARTHY: I believe that is a -- the former. The first  
27 thing you said.

1 JUDGE BARRETT: First, executing -- the present participle --  
2 executing a first data transfer command. Second, delaying execution of  
3 second data transfer command. Doesn't actually say and transferring data  
4 during that time. It is sort of like a future or a possibility or something that  
5 could happen during this delayed execute.

6 MR. McCARTHY: If I may, let me suggest that it is an  
7 alternative. It is a branch. What you're doing is, the claim language says to  
8 delay execution to transfer this in lieu thereof, instead of that. So I believe it  
9 is a positive limitation, not just a desired result. It affirmatively requires the  
10 delay execution to do this. We're not just saying execute first and then --

11 JUDGE BARRETT: -- delay for some reason.

12 MR. McCARTHY: Right, right, right.

13 JUDGE BARRETT: And, you know, that may be one  
14 possibility, something that could happen during the delay.

15 MR. McCARTHY: That is correct, Your Honor.

16 The term "data transfer command," to my knowledge, doesn't  
17 appear exactly in the spec. That is not a requirement obviously. And there  
18 was a 112, paragraph 1 rejection of the description, which was disposed, of  
19 which I'm thankful for.

20 But there were all sorts of terms that hit all around it. There is  
21 access command, scheduled command, there is something called the next  
22 best disk command, the NBDC.

23 There is the next scheduled access command, there is a next  
24 command, there is a pending command, there is a command of interest, there  
25 is a data exchange operation, there is a pending operation, and there is even  
26 a next best access command.

1           Each of these appear in the spec. They're all talking about the  
2 same thing. All of these are data transfer commands, and none of them  
3 include the seek that would be necessary in order for the field to accept in  
4 order to carry out that command.

5           So that is the language in Claims 1 and 25. If it is acceptable to  
6 you, I'd like to talk just briefly about Claim 21. It uses slightly different  
7 language. I believe the result is the same. Claim 21 -- well, you can read it  
8 as well as I can.

9           It says the method comprises steps of transferring first data in  
10 response to an execution of a first pending command -- the language here is  
11 first pending command -- and transferring speculative data instead of second  
12 data associated with the second pending command during the next available  
13 latency period for the second command with the speculative data are  
14 adjudged as having a utility greater than a utility of the second data.

15           As we briefed in here, obviously, we're talking about pending  
16 commands. I don't think there are any problems a skilled artisan wouldn't  
17 understand. First of all, I don't know why we use 25 different modifiers, but  
18 that is just the way things turn out sometimes. They're all talking about the  
19 data transfer command or the pending command.

20           You'll notice that it says "instead of," though, and that is  
21 important in this claim, and that is not by the seek. It is also -- notice that  
22 Claim 21 talks about the utility of the data being adjudged as having a  
23 greater utility. I don't see how that would be carried out by a seek, which  
24 doesn't have any data associated with it.

25           But even if you want to say it does, the second data are still  
26 going to be at the same time. I mean, that is the advantage here. If you'll  
27 allow me to point to this again, Figure 5, again, if you do the -- if you catch



1 up this data and do the seek, this data up here are still going to be carried out  
2 at the same time. So that language is not met.

3 And it doesn't make any sense to say "instead of" because  
4 you're both -- you can do the seek early or late. You still get the data, so  
5 there is no "instead." And it is -- I don't know how to apply the utility.

6 The utility of this is supposed to be greater than that. Fox  
7 doesn't even mention that, so I don't see how we can reasonably conclude  
8 that Claim 21 is anticipated. Of course, that is your judgment and not mine.

9 Are there any questions on Claim 21 that I might --

10 JUDGE BARRETT: Claim 21 is little bit more explicit about  
11 transferring data. That is why I asked that first question.

12 MR. McCARTHY: Yes, Your Honor. I appreciate that, Your  
13 Honor. Your point was made very clear as I was reading Claim 21. There is  
14 no question it is met in that claim, for sure.

15 As far as the 103 rejection, in closing, I simply want to say that  
16 we're all surprised, perhaps we're delighted, with the new KSR case. When  
17 it first came down, I was rather alarmed as a practitioner, but on the other  
18 hand, as I've had a chance to work through it, I actually like it. I may be the  
19 only practitioner you see for a while who does, but I do.

20 JUDGE HAIRSTON: As an aside, what part do you like?

21 MR. McCARTHY: I like the fact that it takes away some of  
22 the strictures. I use this because I'm an applicant. I've always said that, you  
23 know, unless you show clear and particular evidence for the motivation, and  
24 I hammered a lot of people, but as I've gone along, I understand Graham is a  
25 better statement of the law.

1           At the end of the day, you've got to use your gut feeling. I'm  
2   sorry to say, that is what it is. That is how the statute is written. That is how  
3   Graham reads. It is how all these other cases read.

4           And we all want clarity, but at the end of the day, you have to  
5   have sort of this articulated reasoning to show the combination. Graham  
6   says you have to be able to show the skilled artisan would find it desirable to  
7   make this combination.

8           That really is what that TSM test was all about. And I like that.  
9   I like it here because I don't see how the skilled artisan would find it  
10   desirable to make these changes. You've got to have some articulated  
11   reasoning, which is another thing in KSR. You know, it says, You can't just  
12   say I think it is obvious. You have to lay it out.

13           And in this particular case, I'm sure you all noted this, and I  
14   don't want to make a big deal out of it, but I don't think the articulated  
15   reasoning is there.

16           There is a comment when it is talking about the motivation to  
17   combine or the desirability to combine the Furuumi and Hardy references. It  
18   says this is a circular argument. Let's go on to something else. I understand  
19   that. That is okay.

20           But I think the fact remains that since Furuumi doesn't talk  
21   about speculative data at all and Hardy merely says it would be a good idea  
22   to go out and prefetch some additional pages, I don't see how a skilled  
23   artisan would find that to be desirable. In fact, I would see it would teach a  
24   way, which I still think is there, I think the desirability is there, and here is  
25   why.

26           In the mindset of Olds or Furuumi or the prior art, what you're  
27   trying to do is you still want to execute all of the data commands as quickly

1 as possible. What you're doing is you maybe want to pull in some additional  
2 data for a future host hit, but the conventional thinking is you're still going to  
3 do that as fast as you can.

4 So to claim to delay it is counterintuitive. And I do not believe  
5 that it is neither disclosed or countersuggested by the art.

6 The final thing I like about KSR is it leaves undisturbed the  
7 requirement that all of the limitations we taught are suggested by the art.  
8 That is not met here as is briefed in the record.

9 Are there any further questions or things I might say?

10 JUDGE HAIRSTON: That should do it.

11 MR. McCARTHY: Thank you very much.

12 (Whereupon, the proceedings at 1:38 p.m. were concluded.)  
13  
14

15 CERTIFICATE OF REPORTER

16 I, Dawn A. Brown, do hereby certify that the foregoing  
17 proceedings were taken by me in stenotype and thereafter reduced to  
18 typewriting under my supervision; that I am neither counsel for, related to,  
19 nor employed by any of the parties to the action in which these proceedings  
20 were taken; and further, that I am not a relative or employee of any attorney  
21 or counsel employed by the parties hereto, nor financially or otherwise  
22 interested in the outcome of the action.

23  
24  
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27 Notary Public  
28